

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/078150 A1

(51) International Patent Classification⁷: **C23C 4/00**

(21) International Application Number:
PCT/KR2005/000387

(22) International Filing Date: 11 February 2005 (11.02.2005)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2004-0009441
13 February 2004 (13.02.2004) KR

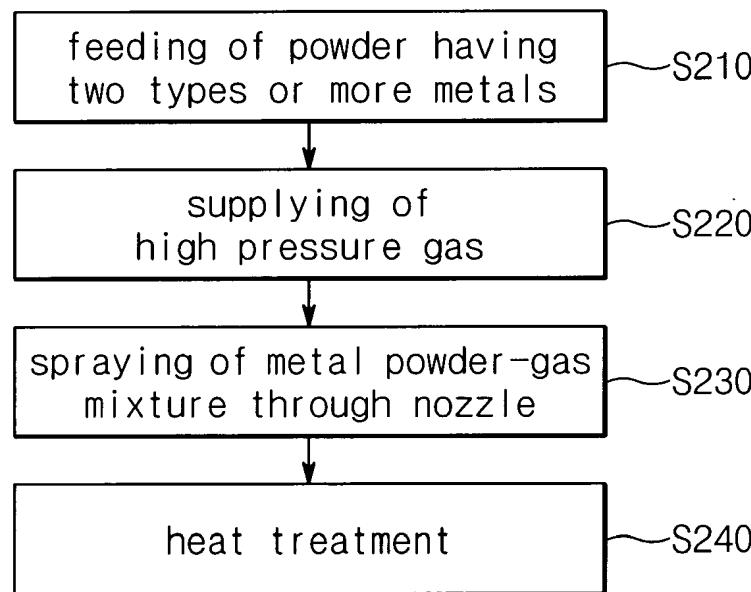
(71) Applicants and

(72) Inventors: **KO, Kyung Hyun** [KR/KR]; 334-1004 Hansin Apt., Jamwon-dong, Seocho-gu, Seoul 137-796 (KR). **LEE, Ha Yong** [KR/KR]; 104-1402 GangbyeonKunyoung Apt., Seongsu1-ga1-dong, Seongdong-gu, Seoul 133-794 (KR).

(74) Agent: **MYUNG MOON IP & LAW FIRM**; 4F, Shinwon Building, 648-15 Yeoksam-dong, Gangnam-gu, Seoul 135-911 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: POROUS COATED MEMBER AND MANUFACTURING METHOD THEREOF USING COLD SPRAY



(57) **Abstract:** Disclosed is a coated member on which a porous metal coating layer is formed and a method of producing the same. The method comprises providing the mother material, feeding powder having a metal composition, which includes at least two different metals selected from the group consisting of Al, Mg, Zn, and Sn and which is expressed by $xA-(1-x)B$ ($0 < x < 1$, where x is a weight ratio of A and B), onto the mother material, supplying high pressure gas to the powder, applying the metal powder on the mother material by spraying the metal powder using the high pressure gas through an supersonic nozzle, and heat-treating the coated mother material to form the porous coating layer. In the method, it is possible to freely control the pore size and porosity of the coated member. Accordingly, it is available to various members for thermal and mechanical applications.